58. A system for extending the transmission bandwidth of a communication network across an enhanced range of frequencies, the network comprising a head end unit, at least one hub or node connected to the head end unit, a plurality of home outlets connected to the at least one hub or node via cables and a plurality of set top boxes connected each to a home outlet unit, the enhanced range of frequencies comprising a frequency range already in use by the communication network for existing channels and an extended frequency range beyond 1 GHz for additional channels, the system comprising:

a plurality of compensation units distributed at predetermined locations within the network for refreshing and maintaining the characteristics of the extended frequency range to overcome line drop losses associated with the extended frequency range due to network infrastructure topography, each compensation unit comprises a frequency selective circuit for selecting the extended frequency range and an amplifying circuit for amplifying the selected extended frequency range;

an enhanced home outlet unit comprising a frequency conversion filtering circuit for separating the extended frequency range from the frequency range already in use; and

an extension unit connected to a set-top box including a tuner for controlling the additional channels in order to enable the user to interact with the additional channels; whereby enabling transmission of data at an extended range of frequencies and at substantially higher data rates.

59. The system of claim 58 wherein the communication network is a cable television system utilizing a plurality of transmission channels and distributing audio, video, text, analog, and digital information.

60. The system according to claims 58 wherein the extended frequency range comprises frequencies between about 1 GHz to about 3 GHz.

61. The system of claim 58 wherein the extended frequency ranges comprises upstream and downstream channels.

62. The system of claim 58 further comprising an upgrade hub or node module connected to the hub or node for adding gain and slope to losses to the extended frequency range.

63. The system of claim 62 wherein the upgrade hub or node module further comprises a data communication unit, the data communication unit comprises a duplex receiver or transmitter for communicating data across the extended frequency range.

64. The system of claim 63 wherein the data communication unit comprises:

a receiver-transmitter for receiving data from a data communication network and for transmitting data to the data communication network;

a demodulator-modulator for encoding the data; and

a data router for directing the data to the data communication network and for directing the data to a central processing unit for processing.

65. The system of claim 63 wherein the upgrade hub or node module further comprises a multiplexer for combing a signal generated by the head end with data transmitted from the data communication unit.

66. The system of claim 58 further comprising an enhanced cable connector assembly comprising a coaxial adapter fitted to a standard cable connector for allowing the transmission of a signal modulated across the extended frequency range.

67. The system of claim 58 wherein each compensation unit further comprises a filter for separating between at least one upstream and downstream channel.

68. The system of claim 58 wherein the compensation frequency selective circuit is a single stage multiplexer for separating the enhanced range of frequency to the frequency range already in use, an extended downstream frequency range and an extended upstream frequency range.

69. The system according to claim 58 wherein the amplifying circuit of the compensation unit comprises a downstream signal amplifier and an upstream signal amplifier for handling gain and slop noise factors decayed in transmission coaxial lines.

70. The system of claim 58 wherein the compensation unit further comprises:

an input connection for receiving a downstream signal and for transmitting an upstream signal;

an equalizer circuit coupled to an output connection of the frequency selective circuit for attenuating lower frequencies of downstream and upstream signals; and

at least one output connection for providing the downstream signal after being processed by the frequency selective circuit, the equalizer circuit, and the amplifying circuit, and for receiving the upstream signal.

71. The system of claim 70 wherein the compensation unit amplifying circuit is coupled to the output connection of the equalizer circuit for the amplification of the downstream signal and the upstream signal.

72. The system of claim 70 wherein the compensation unit further comprises a communication network line distribution unit coupled to the output connection of the compensation unit for receiving the downstream signal, the line distribution unit having an output connection for providing the downstream signal and the upstream signal.

73. The system of claim 58 further comprising an enhanced home splitter unit, the enhanced home splitter unit comprises a band divider for splitting the enhanced frequency range to the extended frequency range and the frequency range already in use and an amplifier for compensating for the losses in the extended frequency range.

74. The system of claim 58 wherein the compensation unit is connected to the communication network as a standalone unit.

75. The system of claim 58 wherein the compensation unit supports two-way symmetrical transmission of signals in the extended frequency range.

76. The system of claim 58 wherein the compensation unit supports two-way asymmetrical transmission of signals in the extended frequency range.

77. The system of claim 62 wherein the upgrade hub or node module is connected to the communication network as a symmetrical device to support two-way symmetrical transmission of signals in the extended frequency range.

78. The system of claim 62 wherein the upgrade hub or node module is connected to the communication network as an asymmetrical device to support two-way asymmetrical transmission of signals in the extended frequency range.

79. The system of claim 73 wherein the enhanced home splitter unit supports two-way symmetrical transmission of signals in the frequency range already in use and the extended frequency range.

80. The system of claim 73 wherein the enhanced home splitter unit supports two-way asymmetrical transmission of signals in the frequency range already in use and the extended frequency range.

81. An extension unit to a set-top box comprising the elements of:

a tuner for controlling broadcast channels within an extended frequency range;

a switch for enabling the selection of at least one mode of operation; and

a filter for separating the extended frequency range to an downstream and upstream pass regions; and

a modem for encoding information and transmitting the information to a user; and

for decoding the information received from the user and transmitting the information upstream to a transmission center.

82. The extension unit to the set-box according to claim 81 wherein the extension unit to the set-top box is connected to a communication network as a symmetrical device to support two-way symmetrical transmission of signals in the extended frequency range.

83. The extension unit to the set-top box according to claim 81 wherein the extension unit to the set-top box is connected to a communication network as an asymmetrical unit to support two-way asymmetrical transmission of signals in the extended frequency range.

84. A compensation unit dividing and amplifying a signal comprising:

a frequency band divider circuit for separating at least two signal streams for selective processing;

a downstream signal amplifying circuit for amplifying a signal representative of information units transmitted by a transmission center to users; and

an upstream signal amplifying circuit for amplifying a signal representative of information sent by users to an transmission center;

an input connection for receiving a downstream signal and for transmitting an upstream signal;

at least one frequency selective circuit coupled to the input connection for separating a least two signal streams;

an equalizer circuit coupled to an output connection of the frequency selective circuit for attenuating lower frequencies of the downstream and upstream signal; and

at least one output connection providing the downstream signal after being processed by the frequency selective circuit, the equalizer circuit, and the downstream and upstream amplifying circuits, and for receiving the upstream signal.

85. The compensation unit of claim 84 further comprising an amplifier circuit coupled to an output connection of the equalizer circuit for the amplification of the downstream signal and the upstream signal.

86. The compensation unit of claim 85 further comprising a communication network line distribution unit coupled to the output connection of the compensation unit for receiving the downstream signal, the line distribution unit having an output connection for providing the downstream signal and the upstream signal.

87. In a communication network utilizing a communication media infrastructure for the transmission of a broadband signal representative of information units received from and sent to external information sources, the information units encoded into modulated electronic signals, the signals multiplexed into the broadband electronic signal, from a transmission center via diverse electronic components operative in the preservation of the transmitted signal to a plurality of users and from the plurality of users via the communication media via the diverse electronic components operative in maintaining the functional characteristics of the transmitted broadband signal to the transmission center,

a method for sending information across an extended frequency range, the extended frequency range comprises frequencies beyond 1 GHz, the method comprising:

combining signals representative of the information received from information sources into a combined broadband signal modulated across an extended frequency range;

superimposing signals representative of information units received from additional information sources onto the broadband signal; and

modulating and transmitting the combined broadband signal across the extended frequency range to a plurality of users or to a transmission center;

amplifying the broadband signal for compensating for line drop losses due to network infrastructure topography;

adding gain and slope to the broadband signal for compensating for signal loss;

filtering the broadband signal for dividing the broadband signal according to predefined frequency regions and according to predefined parameters relating to signal content type and direction of the broadband signal; and

tuning the divided signal for controlling the said division of the divided signal into predefined frequency regions;

whereby utilizing a standard transmission medium previously operating in a significantly narrower bandwidth for transmission in the extended frequency range.

88. The method of claim 87 wherein the extended frequency range comprises frequencies between about 1 GHz to about 3Ghz.

89. The method of claim 87 wherein the communication network is a cable television system carrying video, audio and data information units and any combination thereof to a plurality of users utilizing a plurality of transmission channels.

90. A two-way multi-user transmission and communication system having the capability of utilizing an expanded range of frequencies in order to transmit an increased quantity of information units encoded into electronic signals and inserted into a transmittable broadband signal without affecting the simultaneous transmission of existing transmittable information to a plurality of users, the system comprising:

a compensation unit including at least one downstream and upstream amplifying units for amplifying the broadband signal;

a home outlet splitter unit including a signal divider for distributing a split broadband signal modulated in an extended frequency range beyond 1 GHz;

a home outlet unit including at least one filter for separating the broadband signal into predefined range of frequencies and for manipulating the broadband signal predefined range of frequencies; and

an extension unit to a set-top box for interfacing with a terminal or any other communication device comprising at least one tuner for controlling additional channels within the extended frequency range , at least one filter for separating the predefined range of frequencies, at least one modulator, and at least one demodulator for decoding the broadband signal in order the enable a user to interact with channels or elements of the broadband signal and for encoding information generated by the user or by the set-top box into an upstream region of the broadband signal.

91. The system of claim 90 further comprising an enhanced cable connector, the cable connector comprises a coaxial adapter fitted to a standard cable connector for allowing the transmission of downstream and upstream transmission of broadband signals across the extended frequency range.

92. The system of claim 90 further comprising a data communication unit, the data communication unit comprising at least one data router, at least one modulator, at least one demodulator and a central processing unit for receiving or transmitting broadband signals across the extended frequency range.

93. The system of claim 90 further comprising an upgrade hub module, the upgrade hub module comprising at least one amplifier for compensating for loss of signal, and at least one multiplexer for superimposing additional signals into the broadband signal across the extended frequency range.

94. The system of claim 90 wherein the extended frequency range is between about 1000 and about 3000 Mhz.

95. The system of claim 94 wherein in symmetrical operation mode the extended frequency range of frequencies range of about 1000-3000 Mhz is divided into a downstream and an upstream band each having a range of about 1000 Mhz.